

C. Remarks**1. Status of the Application**

Claims 2-38 are pending in the application. Claims 2-9 and 13-28 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,594,222 ("Caldwell '222") and further in view of U.S. Patent No. 7,242,393 ("Caldwell '393"). The examiner has objected to claims 10-12 as being dependent on a rejected base claim but has indicated that these claims would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Applicant respectfully traverses the foregoing bases for rejection and submits that the claims are allowable over these references, as discussed further below. Notwithstanding, Applicant hereby amends claims 2-4, 23, 26, 28, and 33; cancels claims 13-22, 31-32, and 33-35; and adds new claims 39-46.

2. The Rejections of Claims 2-12 and 29-30 Have Been Overcome.

Claim 2, as currently amended, recites a solid state keyboard formed by the steps of:

- (a) depositing a layer of decorative material onto at least a portion of a substrate;
- (b) depositing a first layer of conductive material ~~as a thin film~~ onto at least a portion of the structure resulting from step (a), said first layer of conductive material being arranged in the form of a first sensor ~~sensing~~ electrode ~~having a shape amenable to substantial coverage by a predetermined object~~;
- (c) depositing a second layer of conductive material onto at least a portion of the structure resulting from step (b), at least a portion of said second layer of conductive material overlying and being electrically coupled to at least a portion of said first layer of conductive material, said second layer of conductive material being arranged in the form of a first bonding pad and a first electrical trace coupling said first sensing electrode to said and a first bonding pad; and
- (d) connecting a first electrical circuit component to said first bonding pad.

(Emphasis added to show current amendments.) The examiner has rejected claim 2, as previously presented, as being unpatentable over Caldwell '222 and/or in view of Caldwell '393 on the grounds that:

[Caldwell '222 discloses] a solid state keyboard formed by, a) depositing a first layer of conductive material as a film onto at least a portion of a substrate (see col 4, lines 11-19 and col. 5, lines 44-48); b) a second layer of conductive material onto at least a portion of the substrate (see col 5, lines 56-59); c) a portion of the second layer of conductive material being electrical coupled to a portion of the first layer of conductive material (see col 5, lines 8-25 and lines 56-59); d) a bonding pad (see col 2, lines 23-32, col 3, lines 4-11, col 5, lines 8-25 and fig 3, items 26 and 28 . . . Caldwell '393 teaches the use of a decorative layer disposed on the surface of a substrate (see col 3, lines 49-55) . . . [and] it would have been obvious to one of ordinary skill in the art the use of some type of indicia means is used in the Caldwell '222 system as taught by Caldwell '393. Caldwell '222 inherently addresses this limitation.

Office Action at 2-3. Applicant respectfully traverses the rejection of claim 2 for several reasons.

First, Applicant submits that Caldwell '393 is not a proper reference under 35 U.S.C. § 103(a), which states that “[s]ubject matter developed by another person, which qualifies as prior art only under one or more of subsections (e), (f), and (g) of section 102 of this title, shall not preclude patentability under this section where the subject matter and the claimed invention were, at the time the claimed invention was made, owned by the same person or subject to an obligation of assignment to the same person.” Title 35 U.S.C. ¶ 103(c)(1). The present invention was made at least as early as April 22, 2003, as evidenced by the disclosure of Applicant’s corresponding U.S. Provisional Patent Application No. 60/464,483, from which the present application claims priority. Caldwell '393 was filed on October 15, 2002, published on July 3, 2003, and issued on July 10, 2007. As such, Caldwell is prior art to the present application only under 35 U.S.C. § 102(e). Further, Applicant submits that both Caldwell '393 and the present invention were, at the time the present invention was made, owned by TouchSensor Technologies, LLC or subject to

an obligation of assignment to TouchSensor Technologies, LLC. Accordingly, Caldwell '393 is not a proper reference under 35 U.S.C. § 103(a).

Second, contrary to the examiner's assertion, Applicant submits that Caldwell '222 does *not* inherently disclose a substrate including a decorative layer or indicia (which the examiner has acknowledged is not expressly disclosed in such reference). A limitation is inherent in a reference only when the limitation is *necessarily* present in the thing described by the reference and would be so recognized by persons of skill in the art. *In re Robertson*, 169 F.3d 743, 49 USPQ2d 1949 (Fed. Cir. 1999). Whereas it might have been desirable or beneficial to include decoration or indicia on the thing described in Caldwell '222, the examiner has set forth no reason why it would be *necessary* to do so. Indeed, there is none. In fact, there might be reasons why it would be desirable *not* to include a decorative layer or indicia on the thing described in Caldwell '222, even if the technology to do so existed. As such, Caldwell '222 neither expressly nor inherently discloses the decorative layer of the present invention.

Third, Applicant submits that neither Caldwell '222 nor Caldwell '393 teaches or suggests depositing a second layer of conductive material onto a substrate bearing a first layer of conductive material such that at least a portion of the second layer of conductive material overlies at least a portion of the first layer of conductive material, as is implicit in the subject matter of claim 2 as previously presented and expressly recited in claim 2 as currently amended. Instead, the Caldwell references simply disclose in this regard sensor electrodes and electrical traces in a single layer and certain electrical components connected to certain ones of such electrodes and electrical traces. The Caldwell references neither teaches nor suggest depositing such sensor electrodes and electrical traces in more than one layer.

For at least the foregoing reasons, Applicant submits that claim 2 is allowable over the cited references. Claims 3-12 depend from claim 2 and, therefore, are patentable over the cited references for at least the same reasons.

3. The Rejections of Claims 23-28 Have Been Overcome.

Claim 23, as previously presented, recited a solid state keyboard comprising a substrate;

at least one layer of decorative material disposed on said substrate;

a thin film of a first conductive material disposed on said decorative material, said thin film of a first conductive material being arranged in the form of a first sensing electrode having a shape amenable to substantial coverage by a predetermined object;

a layer of a second conductive material disposed on at least a portion of said thin film of a first conductive material, said layer of a second conductive material arranged in the form of a second sensing electrode having a shape amenable to substantial coverage by a predetermined object, an electrical trace, and a bonding pad; and

an electrical component connected to said bonding pad.

The examiner contends that the foregoing subject matter is unpatentable for the same reasons as set forth in connection with claim 2 above. Office Action at 5. Applicant respectfully disagrees and submits that the foregoing subject matter is patentable for the reasons set forth above in the discussion of claim 2.

Notwithstanding, Applicant hereby amends claim 23 to more clearly define the invention. Applicant submits that the present amendments do not in any way undermine the patentability of claim 23 as set forth above.

Claims 24-28 depend from claim 23 and, therefore, are patentable for at least the reasons set forth above with respect to claim 23.

4. The Rejections of Claims 33-35 Have Been Overcome.

Claim 33 is a method claim corresponding generally to apparatus claim 2. The examiner contends that claim 33, as previously presented, is unpatentable for the same reasons as set forth in connection with claim 2 above. Office Action at 5. Applicant respectfully disagrees and submits that claim 33, as previously presented, is allowable for reasons similar to those set forth in the discussion of claims 2 and 23 above. Notwithstanding, Applicant hereby amends claim 33 in a manner consistent with the current amendment of claims 2 and 23, which amendments do not in any way undermine the patentability of claim 33 as set forth above. Claims 34-35 depend from claim 33 and, therefore, are patentable for at least the reasons set forth with respect to claim 33.

5. New Claims 39-46 Are Allowable.

New claims 39-46 recite combinations of elements similar to those recited in claims 2, 23, and 33. Applicant submits that these new claims are allowable for at least the reasons set forth above in the discussions of claims 2, 23, and 33.

5. The Present Amendments and New Claims Are Fully Supported.

Applicant submits that support for the present amendments and new claims can be found in the specification at least in Paragraphs [0008], [0019]-[0024] and FIGS. 3 and 4.

6. Conclusion

Applicant respectfully submits that the application is in condition for allowance. Accordingly, Applicant respectfully requests reconsideration and allowance of the claims.

Respectfully submitted,



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Dated: May 2, 2008

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